

Application: 10/670836

Date: 1/30/2008

[File 348] **EUROPEAN PATENTS** 1978-2007/ 200804

(c) 2008 European Patent Office. All rights reserved.

*\*File 348: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.*

[File 349] **PCT FULLTEXT** 1979-2008/UB=20080117UT=20080110

(c) 2008 WIPO/Thomson. All rights reserved.

*\*File 349: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.*

Set Items Description

|     |       |   |
|-----|-------|---|
| S1  | 51106 | S (HETEROGENEOUS OR DIFFERENT OR SEPARATE) (3N) (PROCESSOR? ? OR COMPUTER? ? OR CPU? ? OR CENTRAL() PROCESSING OR SERVER? ? OR MICROCOMPUTER? ? OR PC OR COMPUTING OR MAINFRAME? ? OR MAIN() (FRAME OR FRAMES)) |
| S2  | 4451  | S JVM OR JAVA() VIRTUAL() MACHINE? ? OR JAVA(3N) INTERPRETER OR JAVA(2N) RUNTIME OR JIT   |
| S3  | 1905  | S COMMON() MEMORY   |
| S4  | 21111 | S DIRECT() MEMORY() ACCESS OR DMA   |
| S5  | 0     | S S1 (50N) S2 (50N) S3 (50N) S4   |
| S6  | 19    | S S1 (3N) S2  |
| S7  | 7     | S S6 AND PY<2003  |
| S8  | 23    | S S3 (10N) S4   |
| S9  | 21    | S S2 (100N) S4  |
| S10 | 11    | S S9 AND PY< 2003   |

10/670,836  
EIC search results

7/3K/1 (Item 1 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

EUROPEAN PATENTS

(c) 2008 European Patent Office. All rights reserved.

01431996

**Data processing apparatus, system and method**

Datenverarbeitungsvorrichtung, System und Verfahren

Appareil, systeme et methode de traitement de donnees

**Patent Assignee:**

- **Texas Instruments Incorporated;** (279078)  
7839 Churchill Way, Mail Station 3999; Dallas, Texas 75251; US\ (Applicant designated states: BE; CH; DE; DK; ES; FI; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR; AT; CY)
- **TEXAS INSTRUMENTS FRANCE;** (460913)  
821, avenue Jack Kilby, B.P. 5; 06271 Villeneuve Loubet Cedex; FR\ (Applicant designated states: FR)
- **Institut National de Recherche en Informatique et en Automatique INRIA;** (275934)  
Unite de Recherche INRIA Rennes - IRISA, Campus Universitaire de Beaulieu; 35042 Rennes Cedex; FR\ (Applicant designated states: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR)

**Inventor:**

- **Cabillac, Gilbert**  
15 Rue des Potiers; 35230 Noyal Chatillon Sur Seine; (FR)
- **Lesot, Jean Phillippe**  
La Geraudiere; 35370 Etrelles; (FR)
- **Banatre, Michel**  
28 rue Masse; 35111 La Fresnais; (FR)
- **Routeau, Jean-Paul**  
8 Rue Chatolais; 35235 Thorigne Fouillard; (FR)
- **Parrain, Frederic**  
14 Avenue P. Donzelot; 35000 Rennes; (FR)
- **Issarny, Valerie**  
28 Rue Georges Maliard; 78800 Houilles; (FR)
- **Higuera, Teresa**  
12 Rue Theophile Gautier; 75016 Paris; (FR)
- **Chauvel, Gerard**  
Residence du Valbosquet 20; 292 Chemin du Valbosquet, 06600 Antibes; (FR)
- **D'Inverno, Dominique**  
47 Chemin des Basses Ginestieres; 06270 Villeneuve-Loubet; (FR)

- **Lassere, Serge**

278 Rue du Marsaou; Lieudit St Jean de Cannes, 83600 Frejus; (FR)

**Legal Representative:**

- **Potter, Julian Mark et al (80064)**

D. Young & Co., 21 New Fetter Lane; London EC4A 1DA; (GB)

|             | Country | Number     | Kind | Date     |         |
|-------------|---------|------------|------|----------|---------|
| Patent      | EP      | 1211598    | A1   | 20020605 | (Basic) |
| Application | EP      | 2000403344 |      | 20001129 |         |

**Designated States:**

AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LI; LU; MC; NL; PT; SE; TR;

**Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7):** G06F-009/45 **Abstract Word Count:** 108

**NOTE:** 3

**NOTE:** Figure number on first page: 3

| Type | Pub. Date | Kind | Text |
|------|-----------|------|------|
|------|-----------|------|------|

Publication: English

Procedural: English

Application: English

| Available Text                        | Language  | Update | Word Count |
|---------------------------------------|-----------|--------|------------|
| CLAIMS A                              | (English) | 200223 | 884        |
| SPEC A                                | (English) | 200223 | 7873       |
| Total Word Count (Document A) 8757    |           |        |            |
| Total Word Count (Document B) 0       |           |        |            |
| Total Word Count (All Documents) 8757 |           |        |            |

**Specification:** ...mappings 218. In order to be able to generate different aspects or versions of a **JAVA Virtual Machine** for **different** target host **processors** within a multi-processor system, several different modules are configured to implement the same services...

7/3K/2 (Item 2 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

EUROPEAN PATENTS

(c) 2008 European Patent Office. All rights reserved.

01423355

**Stub search loading system and method, server apparatus, client apparatus, and computer-readable recording medium**

Stubsuchladesystem und -Verfahren, Serverapparat, Clientapparat und computerlesbares Aufzeichnungsmedium

Systeme et methode de recherche de chargement de talon, serveur, client et support informatique d'enregistrement

**Patent Assignee:**

- **NEC CORPORATION; (236690)**  
7-1, Shiba 5-chome, Minato-ku; Tokyo; (JP)  
(Applicant designated States: all)

**Inventor:**

- **Takagi, Junji**  
NEC Corporation, 7-1, Shiba 5-chome; Minato-ku, Tokyo; (JP)

**Legal Representative:**

- **VOSSIUS & PARTNER (100314)**  
Siebertstrasse 4; 81675 Munchen; (DE)

|             | Country | Number     | Kind | Date     |         |
|-------------|---------|------------|------|----------|---------|
| Patent      | EP      | 1202174    | A2   | 20020502 | (Basic) |
|             | EP      | 1202174    | A3   | 20040721 |         |
| Application | EP      | 2001124343 |      | 20011022 |         |
| Priorities  | JP      | 2000322269 |      | 20001023 |         |

**Designated States:**

DE; GB; IT;

**Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7):** G06F-009/46**Abstract Word Count:** 132

**NOTE:** 1

**NOTE:** Figure number on first page: 1

| Type | Pub. Date | Kind | Text |
|------|-----------|------|------|
|------|-----------|------|------|

Publication: English

Procedural: English

Application: English

| Available Text | Language  | Update | Word Count |
|----------------|-----------|--------|------------|
| CLAIMS A       | (English) | 200218 | 2298       |

|                                       |           |        |      |
|---------------------------------------|-----------|--------|------|
| SPEC A                                | (English) | 200218 | 7039 |
| Total Word Count (Document A) 9337    |           |        |      |
| Total Word Count (Document B) 0       |           |        |      |
| Total Word Count (All Documents) 9337 |           |        |      |

**Specification:** ...the Java runtime environments 110 of the same type. However, if the types of the **Java runtime** environments are **different**, only a client **computer** having a **Java runtime** environment adaptive to the stub class downloaded from the server computer 103 normally operates, though... ...server apparatus, client apparatus, and computer-readable recording medium, which allow a plurality of client **computers** using **different** types of **Java runtime** environments to download, from a single server computer, a stub class that can be used ...

7/3K/3 (Item 3 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

# EUROPEAN PATENTS

(c) 2008 European Patent Office. All rights reserved.

01347244

## DATA TRANSFER METHOD AND APPARATUS

DATENUBERTRAGUNGSVERFAHREN UND VORRICHTUNG

PROCEDE ET APPAREIL DE TRANSFERT DE DONNEES

### Patent Assignee:

- **BRITISH TELECOMMUNICATIONS public limited company;** (846100)  
81 Newgate Street; London EC1A 7AJ; (GB)  
(Proprietor designated states: all)

### Inventor:

- **POWER, Mark Philip James**  
Elidir, Tomline Court; Nacton, Suffolk IP10 0HX; (GB)

### Legal Representative:

- **Nash, Roger William et al (87682)**  
BT Group Legal Intellectual Property Department PP C5A BT Centre 81 Newgate Street;  
London EC1A 7AJ; (GB)

|             | Country | Number     | Kind | Date     |         |
|-------------|---------|------------|------|----------|---------|
| Patent      | EP      | 1260078    | A2   | 20021127 | (Basic) |
|             | EP      | 1260078    | B1   | 20070110 |         |
|             | WO      | 2001065801 |      | 20010907 |         |
| Application | EP      | 2001905908 |      | 20010216 |         |
|             | WO      | 2001GB662  |      | 20010216 |         |
| Priorities  | EP      | 2000301648 |      | 20000301 |         |

### Designated States:

DE; FR; GB;

### Extended Designated States:

AL; LT; LV; MK; RO; SI;

### International Patent Class (V7): H04L-029/06

| IPC          | Level | Value | Position | Status | Version  | Action   | Source | Office |
|--------------|-------|-------|----------|--------|----------|----------|--------|--------|
| H04L-0029/06 | A     | I     | F        | B      | 20060101 | 20010911 | H      | EP     |

**NOTE:** No A-document published by EPO

| Type | Pub. Date | Kind | Text |
|------|-----------|------|------|
|------|-----------|------|------|

Publication: English

Procedural: English

Application: English

| Available Text                        | Language  | Update | Word Count |
|---------------------------------------|-----------|--------|------------|
| CLAIMS B                              | (English) | 200702 | 1032       |
| CLAIMS B                              | (German)  | 200702 | 1030       |
| CLAIMS B                              | (French)  | 200702 | 1309       |
| SPEC B                                | (English) | 200702 | 4416       |
| Total Word Count (Document A) 0       |           |        |            |
| Total Word Count (Document B) 7787    |           |        |            |
| Total Word Count (All Documents) 7787 |           |        |            |

**Specification:** ...on the client computer and provide a secure execution environment (called the Java Virtual Machine (**JVM**)) on the client **computer** which is **separate** from the normal execution environment of the client computer (for example Windows). Most web browsers...

7/3K/4 (Item 4 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

EUROPEAN PATENTS

(c) 2008 European Patent Office. All rights reserved.

01273728

**METHOD AND SYSTEM FOR DISTRIBUTING OBJECT-ORIENTED COMPUTER PROGRAMS**

VERFAHREN UND SYSTEM ZUM VERTEILEN VON OBJEKTORIENTIERTEN RECHNERPROGRAMMEN

METHODE ET SYSTEME DE DISTRIBUTION DE LOGICIELS ORIENTES OBJET

**Patent Assignee:**

• **TAO GROUP LIMITED;** (1796852)

62/63 Suttons Business Park, Sutton Park Avenue; Earley, Reading RG6 1AZ; (GB)

(Proprietor designated states: all)

**Inventor:**

• **HINSLEY, Christopher, Andrew**

19 Martin's Drive; Wokingham, Berkshire RG41 1NY; (GB)

• **RENOUF, Timothy**

20 Chesterfield Road; Newbury, Berkshire RG14 7QB; (GB)

**Legal Representative:**

• **Maggs, Michael Norman et al (59191)**

Kilburn & Strode 20 Red Lion Street; London WC1R 4PJ; (GB)

|             | Country | Number     | Kind | Date     |         |
|-------------|---------|------------|------|----------|---------|
| Patent      | EP      | 1214645    | A2   | 20020619 | (Basic) |
|             | EP      | 1214645    | B1   | 20031105 |         |
|             | WO      | 2001016700 |      | 20010308 |         |
| Application | EP      | 2000953341 |      | 20000816 |         |
|             | WO      | 2000GB3172 |      | 20000816 |         |
| Priorities  | GB      | 9920676    |      | 19990901 |         |

**Designated States:**

AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;

GR; IE; IT; LI; LU; MC; NL;

**Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7):** G06F-009/45

**NOTE:** No A-document published by EPO

| Type | Pub. Date | Kind | Text |
|------|-----------|------|------|
|------|-----------|------|------|

Publication: English

Procedural: English

Application: English



| Available Text                        | Language  | Update | Word Count |
|---------------------------------------|-----------|--------|------------|
| CLAIMS B                              | (English) | 200345 | 1052       |
| CLAIMS B                              | (German)  | 200345 | 990        |
| CLAIMS B                              | (French)  | 200345 | 1085       |
| SPEC B                                | (English) | 200345 | 5261       |
| Total Word Count (Document A) 0       |           |        |            |
| Total Word Count (Document B) 8388    |           |        |            |
| Total Word Count (All Documents) 8388 |           |        |            |

**Specification:** ...JIT is processor-dependent, the server would in such an arrangement have to maintain a **different JIT** for each **processor** type that might require to be served. While that might be possible in a fixed...

7/3K/5 (Item 1 from file: 349) [Links](#)

Fulltext available through: [Order File History](#)

PCT FULLTEXT

(c) 2008 WIPO/Thomson. All rights reserved.

00832181

**DATA TRANSFER METHOD AND APPARATUS**

PROCEDE ET APPAREIL DE TRANSFERT DE DONNEES

**Patent Applicant/Patent Assignee:**

- **BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY**; 81 Newgate Street,  
London EC1A 7AJ  
GB; GB(Residence); GB(Nationality)  
(For all designated states except: US)
- **POWER Mark Philip James**; Elidir, Tomline Court, Nacton, Suffolk IP10 0HX  
GB; GB(Residence); GB(Nationality)  
(Designated only for: US)

**Patent Applicant/Inventor:**

- **POWER Mark Philip James**  
Elidir, Tomline Court, Nacton, Suffolk IP10 0HX; GB; GB(Residence); GB(Nationality);  
(Designated only for: US)

**Legal Representative:**

- **ROBINSON Simon Benjamin(agent)**  
BT Group Legal Services, Intellectual Property Department, Holborn Centre, 8th floor, 120  
Holborn, London EC1N 2TE; GB;

|             | Country | Number     | Kind  | Date     |
|-------------|---------|------------|-------|----------|
| Patent      | WO      | 200165801  | A2-A3 | 20010907 |
| Application | WO      | 2001GB662  |       | 20010216 |
| Priorities  | EP      | 2000301648 |       | 20000301 |

**Designated States:** (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LU; MC; NL; PT; SE; TR;

Publication Language: English

Filing Language: English

Fulltext word count: 6716

**Detailed Description:**

...on the client computer and provide a secure execution environment (called the Java Virtual Machine (JVM)) on the client **computer** which is **separate** from the normal execution environment

of the client computer (for example Windows). Most web browsers...

7/3K/6 (Item 2 from file: 349) [Links](#)

Fulltext available through: [Order File History](#)

PCT FULLTEXT

(c) 2008 WIPO/Thomson. All rights reserved.

00832180

**DATA TRANSFER METHOD AND APPARATUS**

PROCEDE ET APPAREIL DE TRANSFERT DE DONNEES

**Patent Applicant/Patent Assignee:**

- **BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY**; 81 Newgate Street,  
London EC1A 7AJ  
GB; GB(Residence); GB(Nationality)  
(For all designated states except: US)
- **POWER Mark Philip James**; Elidir, Tomline Court, Nacton, Ipswich, Suffolk IP10 0HX  
GB; GB(Residence); GB(Nationality)  
(Designated only for: US)

**Patent Applicant/Inventor:**

- **POWER Mark Philip James**  
Elidir, Tomline Court, Nacton, Ipswich, Suffolk IP10 0HX; GB; GB(Residence);  
GB(Nationality); (Designated only for: US)

**Legal Representative:**

- **ROBINSON Simon Benjamin(agent)**  
BT Group Legal Services, Intellectual Property Dept., Holborn Centre, 8th floor, 120 Holborn,  
London EC1N 2TE; GB;

|             | Country | Number     | Kind  | Date     |
|-------------|---------|------------|-------|----------|
| Patent      | WO      | 200165800  | A2-A3 | 20010907 |
| Application | WO      | 2001GB646  |       | 20010216 |
| Priorities  | EP      | 2000301658 |       | 20000301 |

**Designated States:** (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LU; MC; NL; PT; SE; TR;

Publication Language: English

Filing Language: English

Fulltext word count: 5694

**Detailed Description:**

...on the client computer and provide a secure execution environment (called the Java Virtual Machine (**JVM**)) on the client **computer** which is **separate** from the normal execution environment

of the client computer (for example Windows). Most web browsers...

7/3K/7 (Item 3 from file: 349) [Links](#)

Fulltext available through: [Order File History](#)

PCT FULLTEXT

(c) 2008 WIPO/Thomson. All rights reserved.

00803942

**DATA COLLECTION NETWORK APPLIANCE AND METHOD**

PPAREIL ET PROCEDE DE RESEAU POUR LA COLLECTE DE DONNEES

**Patent Applicant/Patent Assignee:**

- **GENERAL ELECTRIC COMPANY**; 1 River Road, Schenectady, NY 12345  
US; US(Residence); US(Nationality)

**Legal Representative:**

- **SNYDER Bernard(et al)(agent)**  
General Electric Company, 3135 Easton Turnpike W3C, Fairfield, CT 06431; US;

|             | Country | Number      | Kind  | Date            |
|-------------|---------|-------------|-------|-----------------|
| Patent      | WO      | 200137533   | A2-A3 | <b>20010525</b> |
| Application | WO      | 2000US27913 |       | 20001010        |
| Priorities  | US      | 99441324    |       | 19991116        |

**Designated States:** (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LU; MC; NL; PT; SE;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML;  
MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ;  
UG; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

Publication Language: English

Filing Language: English

Fulltext word count: 5484

**Detailed Description:**

...machine, which is a self-contained operating environment that behaves as if it is a **separate computer**.

Typically, the **Java virtual machine** runs small Java programs that have been compiled into byte code, which can be run...

10/3K/2 (Item 2 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

EUROPEAN PATENTS

(c) 2008 European Patent Office. All rights reserved.

00959597

**REAL TIME PROGRAM LANGUAGE ACCELERATOR**

**ECHTZEITPROGRAMM-SPRACHBESCHLEUNIGER**

**ACCELERATEUR DE LANGAGE DE PROGRAMMATION TEMPS REEL**

**Patent Assignee:**

- **Paran, Arik**; (2554500)  
866 Helena Drive; Sunnyvale, CA 94087; (US)  
(Proprietor designated states: all)

**Inventor:**

- **RAZ, Yair**  
1575 Lewiston Drive; Sunnyvale, CA 94087; (US)

**Legal Representative:**

- **Steil, Christian, Dipl.-Ing. et al (72534)**  
Witte, Weller & Partner, Rotebuhlstrasse 121; 70178 Stuttgart; (DE)

|             | Country | Number    | Kind | Date     |         |
|-------------|---------|-----------|------|----------|---------|
| Patent      | EP      | 938703    | A1   | 19990901 | (Basic) |
|             | EP      | 938703    | B1   | 20030702 |         |
|             | WO      | 98021655  |      | 19980522 |         |
| Application | EP      | 97951436  |      | 19971113 |         |
|             | WO      | 97US20980 |      | 19971113 |         |
| Priorities  | US      | 30688     | P    | 19961113 |         |

**Designated States:**

AT; BE; CH; DE; DK; ES; FI; FR; GB; GR;  
IE; IT; LI; LU; MC; NL; PT; SE;

**International Patent Class (V7):** G06F-011/00; G06F-009/38

**NOTE:** No A-document published by EPO

| Type | Pub. Date | Kind | Text |
|------|-----------|------|------|
|------|-----------|------|------|

Publication: English

Procedural: English

Application: English

| Available Text | Language  | Update | Word Count |
|----------------|-----------|--------|------------|
| CLAIMS B       | (English) | 200327 | 1393       |
| CLAIMS B       | (German)  | 200327 | 1187       |
| CLAIMS B       | (French)  | 200327 | 1541       |
| SPEC B         | (English) | 200327 | 5306       |

|                                       |
|---------------------------------------|
| Total Word Count (Document A) 0       |
| Total Word Count (Document B) 9427    |
| Total Word Count (All Documents) 9427 |

**Specification:** ...The real time accelerator core 10 has an intelligent stack 12 and a smart **DMA** controller 14. The real time accelerator core 10 will allow real time translation and execution...  
...software based translation or interpretation in a much higher performance mode (compared to the standard **Java(TM) interpreter** or **JIT** compilers). It should be noted that, in the example of Figure 1, the program language...



Application: 10/670836

Date: 1/30/2008

[File 347] **JAPIO** Dec 1976-2007/Sep(Updated 080116)

(c) 2008 JPO & JAPIO. All rights reserved.

[File 350] **Derwent WPIX** 1963-2008/UD=200807

(c) 2008 The Thomson Corporation. All rights reserved.

*\*File 350: English-language translations of Chinese Utility Model registrations are available starting with update 200769.*

| Set | Items | Description   |
|-----|-------|---|
| S1  | 20746 | S (HETEROGENEOUS OR DIFFERENT OR SEPARATE) (3N) (PROCESSOR? ? OR COMPUTER? ? OR CPU? ? OR CENTRAL() PROCESSING OR SERVER? ? OR MICROCOMPUTER? ? OR PC OR COMPUTING OR MAINFRAME? ? OR MAIN() (FRAME OR FRAMES)) |
| S2  | 1130  | S JVM OR JAVA() VIRTUAL() MACHINE? ? OR JAVA(3N) INTERPRETER OR JAVA(2N) RUNTIME OR JIT   |
| S3  | 3699  | S COMMON() MEMORY   |
| S4  | 13428 | S DIRECT() MEMORY() ACCESS OR DMA   |
| S5  | 0     | S S1 (100N) S2 (100N) S3 (100N) S4  |
| S6  | 4     | S S1 (3N) S2  |
| S7  | 2     | S S6 AND PY<2003  |
| S8  | 6     | S S1 (10N) S2   |
| S9  | 6     | S S1 (20N) S2   |
| S10 | 7     | S S1 (30N) S2   |
| S11 | 2     | S S10 AND PY<2003   |
| S12 | 0     | S S11 NOT S7  |

7/3,K/1 (Item 1 from file: 350) [Links](#)

Fulltext available through: [Order File History](#)

Derwent WPIX

(c) 2008 The Thomson Corporation. All rights reserved.

0012498463 *Drawing available*

WPI Acc no: 2002-446128/**200248**

XRFX Acc No: N2002-351508

**Stub search loading system used in computer, transmits stub appropriate for runtime environment of client computer, based on designated stub name and client identifier**

Patent Assignee: NEC CORP (NIDE)

Inventor: TAKAGI J

Patent Family ( 1 patents, 26 countries )

| Patent Number | Kind | Date     | Application Number | Kind | Date     | Update | Type |
|---------------|------|----------|--------------------|------|----------|--------|------|
| EP 1202174    | A2   | 20020502 | EP 2001124343      | A    | 20011022 | 200248 | B    |

Priority Applications (no., kind, date): JP 2000322069 A 20001023

Patent Details

| Patent Number                       | Kind  | Lan | Pgs | Draw | Filing Notes |
|-------------------------------------|---|-----|-----|------|--------------|
| EP 1202174                          | A2  | EN  | 24  | 12   |              |
| Regional Designated States,Original | AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR |     |     |      |              |

**Alerting Abstract ... ADVANTAGE** - The client having different types of **JAVA** runtime environments efficiently downloads an appropriate **stub** from a **server within short time**. The need for preparing the stubs corresponding to all configurations beforehand for dynamically generating a...  
... Basic Derwent Week: **200248**...

7/3,K/2 (Item 2 from file: 350) [Links](#)

Fulltext available through: [Order File History](#)

Derwent WPIX

(c) 2008 The Thomson Corporation. All rights reserved.

0009752533

WPI Acc no: 2000-038868/**200003**

XRPX Acc No: N2000-029298

**Programmable processor for word-processing, image processing and finance application**

Patent Assignee: JCP COMPUTER SERVICES LTD (JCPC-N); SUN MICROSYSTEMS INC (SUNM)

Inventor: BAND J A; PATTERSON A J; SADLER A P; STAMMERS S

Patent Family ( 4 patents, 85 countries )

| Patent Number | Kind | Date     | Application Number | Kind | Date     | Update | Type |
|---------------|------|----------|--------------------|------|----------|--------|------|
| WO 1999057634 | A1   | 19991111 | WO 1999GB1390      | A    | 19990505 | 200003 | B    |
| AU 199937223  | A    | 19991123 | AU 199937223       | A    | 19990505 | 200016 | E    |
| EP 993631     | A1   | 20000419 | EP 1999919434      | A    | 19990505 | 200024 | E    |
|               |      |          | WO 1999GB1390      | A    | 19990505 |        |      |
| US 7069554    | B1   | 20060627 | WO 1999GB1390      | A    | 19990505 | 200643 | E    |
|               |      |          | US 2000478624      | A    | 20000105 |        |      |

Priority Applications (no., kind, date): GB 199814615 A 19980506; GB 19989670 A 19980506; GB 199814615 A 19980706

Patent Details

| Patent Number                       | Kind   | Lan | Pgs | Draw | Filing Notes                |               |
|-------------------------------------|--|-----|-----|------|-----------------------------|---------------|
| WO 1999057634                       | A1   | EN  | 144 | 25   |                             |               |
| National Designated States,Original | AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW |     |     |      |                             |               |
| Regional Designated States,Original | AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW  |     |     |      |                             |               |
| AU 199937223                        | A  | EN  |     |      | Based on OPI patent         | WO 1999057634 |
| EP 993631                           | A1   | EN  |     |      | PCT Application             | WO 1999GB1390 |
|                                     |  |     |     |      | Based on OPI patent         | WO 1999057634 |
| Regional Designated States,Original | AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI   |     |     |      |                             |               |
| US 7069554                          | B1   | EN  |     |      | Continuation of application | WO 1999GB1390 |

Original Publication Data by Authority...**Original Abstracts:**the application have been fetched.Computer (2) is arranged to install the components in a **Java virtual machine** using a **different** classloader for each component and to perform control to permit inter-component

interaction and interaction... .. Basic Derwent Week: **200003**...

.

Application: 10/670836                      Date: 1/30/2008

[File 8] **Ei Compendex(R)** 1884-2008/Jan W3  
(c) 2008 Elsevier Eng. Info. Inc. All rights reserved.

[File 35] **Dissertation Abs Online** 1861-2007/Oct  
(c) 2007 ProQuest Info&Learning. All rights reserved.

[File 65] **Inside Conferences** 1993-2008/Jan 29  
(c) 2008 BLDSC all rts. reserv. All rights reserved.

[File 2] **INSPEC** 1898-2008/Dec W5  
(c) 2008 Institution of Electrical Engineers. All rights reserved.

[File 6] **NTIS** 1964-2008/Jan W4  
(c) 2008 NTIS, Intl Cpyrght All Rights Res. All rights reserved.

[File 144] **Pascal** 1973-2008/Jan W3  
(c) 2008 INIST/CNRS. All rights reserved.

[File 34] **SciSearch(R) Cited Ref Sci** 1990-2008/Jan W3  
(c) 2008 The Thomson Corp. All rights reserved.

[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec  
(c) 2006 The Thomson Corp. All rights reserved.

[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2007/Nov  
(c) 2007 The HW Wilson Co. All rights reserved.

[File 266] **FEDRIP** 2007/Oct  
Comp & dist by NTIS, Intl Copyright All Rights Res. All rights reserved.

[File 95] **TEME-Technology & Management** 1989-2008/Jan W3  
(c) 2008 FIZ TECHNIK. All rights reserved.

[File 583] **Gale Group Globalbase(TM)** 1986-2002/Dec 13  
(c) 2002 The Gale Group. All rights reserved.  
*\*File 583: This file is no longer updating as of 12-13-2002.*

[File 256] **TecInfoSource** 82-2008/Nov  
(c) 2008 Info.Sources Inc. All rights reserved.

[File 56] **Computer and Information Systems Abstracts** 1966-2008/Dec  
(c) 2008 CSA. All rights reserved.

[File 60] **ANTE: Abstracts in New Tech & Engineer** 1966-2008/Dec  
(c) 2008 CSA. All rights reserved.

| Set | Items | Description  |
|-----|-------|--|
| S1  | 39307 | S (HETEROGENEOUS OR DIFFERENT OR SEPARATE) (3N) (PROCESSOR? ? OR COMPUTER? ? OR CPU? ? OR CENTRAL()PROCESSING OR SERVER? ? OR MICROCOMPUTER? ? OR PC OR COMPUTING OR MAINFRAME? ? OR MAIN() (FRAME OR FRAMES)) |
| S2  | 11310 | S JVM OR JAVA()VIRTUAL()MACHINE? ? OR JAVA(3N) INTERPRETER OR JAVA(2N) RUNTIME OR JIT  |
| S3  | 1080  | S COMMON()MEMORY   |
| S4  | 23152 | S DIRECT()MEMORY()ACCESS OR DMA  |
| S5  | 22    | S S1 (3N) S2   |
| S6  | 9     | RD S5 (unique items)   |
| S7  | 5     | S S6 AND PY < 2004   |
| S8  | 48    | S S1 (20N) S2  |
| S9  | 25    | RD S8 (unique items)   |
| S10 | 15    | S S9 AND PY < 2004   |
| S11 | 10    | S S10 NOT S7   |

7/5,K/1 (Item 1 from file: 8) **Links**

Fulltext available through: [STIC Full Text Retrieval Options](#)  
Ei Compendex(R)

(c) 2008 Elsevier Eng. Info. Inc. All rights reserved.

08885266 E.I. No: EIP01376642115

**Title: The Hyperion system: Compiling multithreaded Java bytecode for distributed execution**

**Author:** Antoniu, G.; Bouge, L.; Hatcher, P.; MacBeth, M.; McGuigan, K.; Namyst, R.

**Corporate Source:** LIP ENS Lyon, 69364 Lyon Cedex 07, France

**Source:** Parallel Computing v 27 n 10 September 2001. p 1279-1297

**Publication Year:** 2001

**CODEN:** PACOEJ **ISSN:** 0167-8191

**Language:** English

**Document Type:** JA; (Journal Article) **Treatment:** T; (Theoretical)

**Journal Announcement:** 0109W3

**Abstract:** Our work combines Java compilation to native code with a run-time library that executes Java threads in a distributed memory environment. This allows a Java programmer to view a cluster of processors as executing a single **JAVA virtual machine**. The **separate processors** are simply resources for executing Java threads with true parallelism, and the run-time system provides the illusion of a shared memory on top of the private memories of the processors. The environment we present is available on top of several UNIX systems and can use a large variety of communication interfaces thanks to the high portability of its run-time system. To evaluate our approach, we compare serial C, serial Java, and multithreaded Java implementations of a branch-and-bound solution to the minimal-cost map-coloring problem. All measurements have been carried out on two platforms using two different communication interfaces: SISC/SCI and MPI-BIP/Myrinet. copy 2001 Elsevier Science B.V. All rights reserved. 22 Refs.

**Descriptors:** \*Distributed computer systems; Multiprogramming; Subroutines; Java programming language; Codes (symbols); Virtual storage; UNIX; C (programming language); Program compilers

**Identifiers:** Multithreading

**Classification Codes:**

723.1.1 (Computer Programming Languages)

722.4 (Digital Computers & Systems); 723.1 (Computer Programming); 723.2 (Data Processing);

722.1 (Data Storage, Equipment & Techniques)

722 (Computer Hardware); 723 (Computer Software, Data Handling & Applications)

72 (COMPUTERS & DATA PROCESSING)

**Abstract:** ...This allows a Java programmer to view a cluster of processors as executing a single **JAVA virtual machine**. The **separate processors** are simply resources for executing Java threads with true parallelism, and the run-time system...



7/5,K/2 (Item 2 from file: 8) [Links](#)

Fulltext available through: [STIC Full Text Retrieval Options](#) STIC Full Text Retrieval Options  
Ei Compendex(R)

(c) 2008 Elsevier Eng. Info. Inc. All rights reserved.

08712364 E.I. No: EIP00115414452

**Title:** Ajents: towards an environment for parallel, distributed and mobile Java applications

**Author:** Izatt, Matthew; Chan, Patrick; Brecht, Tim

**Corporate Source:** York Univ, Toronto, Ont, Can

**Conference Title:** ACM 1999 Java Grande Conference

**Conference Location:** San Francisco, CA, USA **Conference Date:** 20990612-20990614

**Sponsor:** ACM SIGPLAN

**E.I. Conference No.:** 57577

**Source:** Concurrency Practice and Experience v 12 n 8 Jul 2000. p 667-685

**Publication Year:** 2000

**CODEN:** CPEXEI **ISSN:** 1040-3108

**Language:** English

**Document Type:** JA; (Journal Article) **Treatment:** A; (Applications); G; (General Review)

**Journal Announcement:** 0101W1

**Abstract:** The rapid proliferation of the World-Wide Web has been due to the seamless access it provides to information that is distributed both within organizations and around the world. In this paper, we describe the design and implementation of a system, called Ajents, which provides the software infrastructure necessary to support a similar level of seamless access to organization-wide or world-wide heterogeneous computing resources. Ajents introduces class libraries which are written entirely in Java and that run on any standard compliant Java virtual machine. These class libraries implement and combine several important features that are essential to supporting distributed and parallel computing using Java. These features include: the ability to easily create objects on remote hosts, to interact with those objects through either synchronous or asynchronous remote method invocations, and to freely migrate objects to heterogeneous hosts. While some of these features have been implemented in other systems, Ajents provides support for the combination of all of these features using techniques that permit them to operate together in a fashion that is more transparent and/or less restrictive than existing systems. Our experimental results show that in our test environment: we are able to achieve good speedup on a sample parallel application; the overheads introduced by our implementation do not adversely affect remote method invocation times; and (somewhat surprisingly) the cost of migration does not greatly impact the execution time of an example application. (Author abstract) 32 Refs.

**Descriptors:** \*Java programming language; Parallel processing systems; Distributed computer systems; World Wide Web; Systems analysis; Computer software; Object oriented programming; Response time (computer systems)

**Identifiers:** Ajent system; **Java virtual machine**; **Heterogeneous computing** resources; Middleware; Remote method invocation times; Execution time

**Classification Codes:**

723.1.1 (Computer Programming Languages)

723.1 (Computer Programming); 722.4 (Digital Computers & Systems); 723.5 (Computer Applications); 912.3 (Operations Research)

723 (Computer Software); 722 (Computer Hardware); 912 (Industrial Engineering & Management)

72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT)

**Identifiers:** Ajent system; **Java virtual machine**; **Heterogeneous computing** resources;



Middleware; Remote method invocation times; Execution time

7/5,K/3 (Item 1 from file: 2) [Links](#)

INSPEC

(c) 2008 Institution of Electrical Engineers. All rights reserved.

07905328 **INSPEC Abstract Number:** C2001-05-6150C-034

**Title:** **Compiling multithreaded Java bytecode for distributed execution**

**Author** Antoniu, G.; Bouge, L.; Hatcher, P.; Macbeth, M.; McGuigan, K.; Namyst, R.

**Author Affiliation:** LIP, ENS Lyon, France

**Conference Title:** Euro-Par 2000 Parallel Processing. 6th International Euro-Par Conference.

Proceedings (Lecture Notes in Computer Science Vol.1900) p. 1039-52

**Editor(s):** Bode, A.; Ludwig, T.; Karl, W.; Wismuller, R.

**Publisher:** Springer-Verlag, Berlin, Germany

**Publication Date:** 2000 **Country of Publication:** Germany xxxv+1368 pp.

**ISBN:** 3 540 67956 1 **Material Identity Number:** XX-2000-02064

**Conference Title:** Proceedings of Euro-Par 2000. European Conference on Parallel Computing

**Conference Sponsor:** Deutsche Forschungsgemeinschaft; KONWIHR; Tech. Univ. Munchen;

ACM; IFIP; IEEE Task Force on Cluster Comput.; et al

**Conference Date:** 29 Aug.-1 Sept. 2000 **Conference Location:** Munich, Germany

**Language:** English **Document Type:** Conference Paper (PA)

**Treatment:** Practical (P)

**Abstract:** Our work combines Java compilation to native code with a run-time library that executes Java threads in a distributed-memory environment. This allows a Java programmer to view a cluster of processors as executing a single **Java virtual machine**. The **separate processors** are simply resources for executing Java threads with true concurrency and the run-time system provides the illusion of a shared memory on top of the private memories of the processors. The environment we present is available on top of several UNIX systems and can use a large variety of network protocols thanks to the high portability of its run-time system. To evaluate our approach, we compare serial C, serial Java, and multithreaded Java implementations of a branch-and-bound solution to the minimal-cost map-coloring problem. All measurements have been carried out on two platforms using two different network protocols: SISC/SCI and MPI-BIP/Myrinet. ( 17 Refs)

**Subfile:** C

**Descriptors:** Java; program compilers; programming environments

**Identifiers:** Java compilation; Java threads; distributed-memory environment; network protocols; portability

**Class Codes:** C6150C (Compilers, interpreters and other processors); C6115 (Programming support); C6110J (Object-oriented programming)

Copyright 2001, IEE

**Abstract:** ...This allows a Java programmer to view a cluster of processors as executing a single **Java virtual machine**. The **separate processors** are simply resources for executing Java threads with true concurrency and the run-time system...

2000

7/5,K/4 (Item 1 from file: 144) [Links](#)

Fulltext available through: [INIST Full Text Retrieval Options](#) [STIC Full Text Retrieval Options](#)  
Pascal

(c) 2008 INIST/CNRS. All rights reserved.

15475502 PASCAL No.: 02-0169434

Distributed execution of functional programs using the JVM  
Computer aided systems theory - EUROCAST 2001 : Las Palmas de Gran  
Canaria, 19-23 February 2001, selected & revised papers

RAUBER DU BOIS Andre; DA ROCHA COSTA Antonio Carlos

MORENO-DIAZ Roberto, ed; BUCHBERGER Bruno, ed; FREIRE Jose-Luis, ed  
UFRGS-Universidade Federal do Rio Grande do Sul, Instituto de  
Informatica, Programa de Pos-Graduacao em Computacao (PPGC) Caixa  
Postal  
15064, 91501-900, Porto Alegre, RS, Brazil; UCPel-Universidade  
Catolica de  
Pelotas, Escola de Informatica, Rua Felix da Cunha 412, 96010-000,  
Pelotas,  
RS, Brazil

International workshop on computer aided systems theory, 8 (Las  
Palmas  
de Gran Canaria ESP) 2001-02-19

Journal: Lecture notes in computer science,  
2001, 2178 570-582

ISBN: 3-540-42959-X ISSN: 0302-9743 Availability:  
INIST-16343; 354000097054100440

No. of Refs.: 16 ref.

Document Type: P (Serial); C (Conference Proceedings) ; A (Analytic)

Country of Publication: Germany

Language: English

We present in this paper the implementation, in the Java language,  
of a  
distributed environment for running functional programs. The idea  
is to  
join **Java Virtual Machines** (JVMs) running on  
**different computers** into a single virtual machine for running  
functional programs. To test this virtual machine we have  
implemented a  
small Haskell like functional language in which parallelism is  
expressed by  
some simple combinators.

English Descriptors: Distributed algorithm; Program execution; JAVA  
language; Virtual machine; Functional language; Parallelism

French Descriptors: Algorithme reparti; Execution programme; Langage



JAVA;

Machine virtuelle; Langage fonctionnel; Parallelisme

Classification Codes: 001D02B10

Copyright (c) 2002 INIST-CNRS. All rights reserved.

2001

... Java language, of a distributed environment for running functional programs. The idea is to join **Java Virtual Machines** (JVMs) running on **different computers** into a single virtual machine for running functional programs. To test this virtual machine we...

7/5,K/5 (Item 1 from file: 34) **Links**

Fulltext available through: [STIC Full Text Retrieval Options](#) STIC Full Text Retrieval Options  
SciSearch(R) Cited Ref Sci

(c) 2008 The Thomson Corp. All rights reserved.

12527975 **Genuine Article#:** BY43J **Number of References:** 16

**Distributed execution of functional programs using the JVM**

**Author:** Du Bois AR (REPRINT) ; Costa ACD

**Corporate Source:** Univ Fed Rio Grande Sul,Inst Informat, Programa Pos Grad Computac,Caixa Postal 15064/BR-91501900 Porto Alegre/RS/Brazil/ (REPRINT); Univ Fed Rio Grande Sul,Inst Informat, Programa Pos Grad Computac,BR-91501900 Porto Alegre/RS/Brazil/; Univ Catolica Pelotas,UCPel, Escola Informat,BR-96010000 Pelotas/RS/Brazil/ , 2001 , V 2178 , P 570-582

**ISSN:** 0302-9743 **Publication date:** 20010000

**Publisher:** SPRINGER-VERLAG BERLIN , HEIDELBERGER PLATZ 3, D-14197 BERLIN, GERMANYCOMPUTER AIDED SYSTEMS THEORY - EUROCAST 2001

**Series:** LECTURE NOTES IN COMPUTER SCIENCE

**Language:** English **Document Type:** ARTICLE

**Geographic Location:** Brazil

**Journal Subject Category:** COMPUTER SCIENCE, THEORY & METHODS

**Abstract:** We present in this paper the implementation, in the Java language, of a distributed environment for running functional programs. The idea is to join **Java Virtual Machines (JVMs)** running on **different computers** into a single virtual machine for running functional programs. To test this virtual machine we have implemented a small Haskell like functional language in which parallelism is expressed by some simple combinators.

**Cited References:**

AUGUSTSSON L, 1984, P218, P 1984 ACM S LISP FU

CHOI K, 2001, 5 INT S FUNCT LOG PR

DUBOIS AR, 2000, P9, INT WORKSH FUNCT LOG

FLANAGAN D, 1999, JAVA NUTSHELL

HAMMOND K, 1994, PASCO

HANUS M, 1999, P6, J FUNCTIONAL LOGIC P

JONES SLP, 1987, IMPLEMENTATION FUNCT

JONES SLP, 1992, IMPLEMENTING FUNCTIO

JONES SLP, 1998, P 5 INT C SOFTW REUS

MEEHAN G, 1998, COMPILING FUNCTIONAL

MEIJER E, 1997, P HASK WORKSH

TRINDER PW, 1998, V8, P23, J FUNCTIONAL PROGRAM

TRINDER PW, 1996, P78, P 1996 ACM C PROGR L

WAKELING D, 1998, P335, P PRINC DECL PROGR P

WAKELING D, 1998, V1, P1, J FUNCTIONAL PROGRAM

WAKELING D, 1998, V1467, P39, LNCS

, 2001

**Abstract:** ...Java language, of a distributed environment for running functional programs. The idea is to join **Java Virtual Machines (JVMs)** running on **different computers** into a single virtual machine for running functional programs. To test this virtual machine we...

? t 11/5,k/3,4,5,6,7,8,10

11/5,K/3 (Item 1 from file: 35) [Links](#)

Dissertation Abs Online

(c) 2007 ProQuest Info&Learning. All rights reserved.

01978644 ORDER NO: AADAA-INQ85195

**The co-design of virtual machines using reconfigurable hardware**

**Author:** Kent, Kenneth Blair

**Degree:** Ph.D.

**Year:** 2003

**Corporate Source/Institution:** University of Victoria (Canada) ( 0244 )

**Adviser:** Micaela Serra

**Source:** Volume 6410B of Dissertations Abstracts International.

**PAGE** 5036 . 188 PAGES

**Descriptors:** COMPUTER SCIENCE

**Descriptor Codes:** 0984

**ISBN:** 0-612-85195-8

The prominence of the internet and networked computing has driven research efforts into providing support for **heterogeneous computing** platforms. This has been exemplified by the emergence of virtual machines, such as the **Java virtual machine**. Unfortunately, most virtual computing platforms come with a performance penalty. This dissertation investigates a new approach for providing virtual computing platforms through the use of reconfigurable computing devices and hardware/software co-design.

Traditionally, when designing a hardware/software solution, instance specific methods are used to iterate towards a solution that satisfies the requirements. This is not an ideal approach as the costs involved with integrating hardware and software components are significant. This technique demotes the interface between the hardware and software, often resulting in major complications at the integration stage. These problems can be avoided through adherence to a sound methodology which the co-design process follows.

This dissertation examines the original concept of using hardware/software co-design and reconfigurable computing as a means of providing virtual machine platforms. Specifically the contributions include an advancement towards a new general computing paradigm and architecture; guidelines and several algorithms for applying the general hardware/software co-design process to the specific virtual machine class of problems; and an assessment of the potential advantages of using co-design as an implementation approach for virtual machines. These are applied to the Java virtual machine and simulated for insights into the potential benefits, requirements, and caveats of co-design for virtual machines.

This research demonstrates that using hardware/software co-design as described specifically for virtual machines, the solution can offer performance benefits over a software-only solution. These performance increases will be shown to be dependent upon several factors such as the application itself and the underlying architectural features. This dissertation will promote and give evidence that reconfigurable computing can be used for more general purpose computing and not just for specific problem instances.

**Year:** 2003

...prominence of the internet and networked computing has driven research efforts into providing support for **heterogeneous computing** platforms. This has been exemplified by the emergence of



virtual machines, such as the **Java virtual machine**. Unfortunately, most virtual computing platforms come with a performance penalty. This dissertation investigates a new...

11/5,K/4 (Item 2 from file: 35) [Links](#)

Dissertation Abs Online

(c) 2007 ProQuest Info&Learning. All rights reserved.

01678797 ORDER NO: AAD99-12298

**AN INFRASTRUCTURE FOR WORLDWIDE PARALLEL COMPUTING (DISTRIBUTED COMPUTING, INTERNET, WORLD WIDE WEB, JAVA)**

**Author:** KWAN, THOMAS TAI YUNG

**Degree:** PH.D.

**Year:** 1998

**Corporate Source/Institution:** UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ( 0090 )

**Adviser:** DANIEL A. REED

**Source:** Volume 5911B of Dissertations Abstracts International.

**PAGE** 5936 . 190 PAGES

**Descriptors:** COMPUTER SCIENCE

**Descriptor Codes:** 0984

With advances in high-speed networking, exploding interest in the World Wide Web (WWW), and widespread availability of Java, millions of Java-capable computers are now connected to the Internet. These **heterogeneous** laptops, personal **computers**, and workstations are emerging as a pool of distributed, platform-independent, **Java virtual machines**. The large-scale deployment of these systems provides the hardware needed for a national and international computing infrastructure, a virtual parallel computer that can be tapped for many uses.

Although this infrastructure will have a great impact on distributed information processing and distributed computing, developing this middleware to support such wide area computing poses a host of thorny problems. The wide fluctuations in achievable network bandwidth, changing system availability, and significant differences in system capabilities make exploiting the large number of computing cycles available in Java-capable, WWW clients and servers extraordinarily difficult. One can effectively exploit these distributed computing cycles only when an infrastructure exists that can adapt to these variations, while providing reasonable performance and acceptable reliability. Simply put, the unreliable nature of wide area networks suggests the need for robust acquisition of distributed state information.

In this thesis, we describe the robust information acquisition techniques, software design, prototype implementation, and performance evaluation of a Java-based infrastructure for supporting large-scale parallel computing on the Internet. We present results on the projected cost and performance of large scale infrastructures, and show that, given current technologies, it is feasible to construct hierarchies with 25,000 WWW browsers and 600 WWW servers. In addition, we validate our performance/reliability models via experiments, show that the time scale of world view maintenance and task scheduling are on the order of minutes, and that prediction techniques can enable the maintenance of a distributed hierarchy for large scale application scheduling.

**Year:** 1998

...availability of Java, millions of Java-capable computers are now connected to the Internet. These **heterogeneous** laptops, personal **computers**, and workstations are emerging as a pool of distributed, platform-independent, **Java virtual machines**. The large-scale deployment of these systems provides the hardware needed for a national and...



11/5,K/5 (Item 1 from file: 2) **Links**

Fulltext available through: [INSPEC Full Text Retrieval Options](#) [STIC Full Text Retrieval Options](#)  
INSPEC

(c) 2008 Institution of Electrical Engineers. All rights reserved.

09171929 **INSPEC Abstract Number:** C2004-12-6140D-019

**Title:** JAVA language for embedded computer systems

**Author** Doyle, K.

**Author Affiliation:** Avnet-Gruppe gehorigen Distributor WBC, UK

**Journal:** Elektronik Praxis no.15 p. 36-9

**Publisher:** Vogel-Verlag ,

**Publication Date:** 5 Aug. 2003 **Country of Publication:** Germany

**CODEN:** EKPXAM **ISSN:** 0341-5589

**SICI:** 0341-5589(20030805)15L:36:JLEC;1-T

**Material Identity Number:** E248-2003-015

**Language:** German **Document Type:** Journal Paper (JP)

**Treatment:** Practical (P)

**Abstract:** This article describes a "JAVA" language capable of interworking with **different computer** systems. It illustrates a **Java virtual machine (JVM)**, which can convert compiled byte code into machine-specific instructions. It refers to JAVA applets J2EE, J2SE and J2ME, and lists their memory requirements. It also discusses JIT and AOT compilers for embedded applications and illustrates "Jazelle" modules integrated into ARM cores, to allow change between 32-bit ARM mode and 16-bit Thumb mode. In conclusion, it presents a Java thermometer demonstration kit from the Zilog Company.

**Subfile:** C

**Descriptors:** embedded systems; Java; program compilers; virtual machines

**Identifiers:** JAVA language; embedded computer systems; Java virtual machine; compiled byte code; machine-specific instructions; JAVA applet memory requirements; compilers; Jazelle modules; ARM cores; ARM mode; Thumb mode; Java thermometer demonstration kit; 32 bit; 16 bit

**Class Codes:** C6140D (High level languages); C6150C (Compilers, interpreters and other processors)

**Numerical Indexing:** word length 3.2E+01 bit; word length 1.6E+01 bit

Copyright 2004, IEE

**Abstract:** This article describes a "JAVA" language capable of interworking with **different computer** systems. It illustrates a **Java virtual machine (JVM)**, which can convert compiled byte code into machine-specific instructions. It refers to JAVA applets...

**2003**

11/5,K/6 (Item 2 from file: 2) **Links**

Fulltext available through: [JSPRO Full Text Retrieval Options](#) [STIC Full Text Retrieval Options](#)  
INSPEC

(c) 2008 Institution of Electrical Engineers. All rights reserved.

08882289 **INSPEC Abstract Number:** C2004-04-4210L-031

**Title:** Efficient implementation of strict floating-point semantics

**Author** Shudo, K.; Sekiguchi, S.; Muraoka, Y.

**Author Affiliation:** National Inst. of Adv. Ind. Sci. & Technol., Japan

**Journal:** Transactions of the Information Processing Society of Japan vol.44, no.6 p. 1570-82

**Publisher:** Inf. Process. Soc. Japan ,

**Publication Date:** June 2003 **Country of Publication:** Japan

**CODEN:** JSGRD5 **ISSN:** 0387-5806

**SICI:** 0387-5806(200306)44:6L;1-570:EISF;1-H

**Material Identity Number:** T205-2003-008

**Language:** Japanese **Document Type:** Journal Paper (JP)

**Treatment:** Applications (A); Practical (P)

**Abstract:** IA-32 processors yield different results of floating-point operations from other processors, even though they are compliant with IEEE 754. The **Java** specifications need **runtime** systems to implement the FP-strict semantics, which other IEEE 754 compliant processors naturally fulfill. We implemented the semantics on a Java Just-In-Time compiler for IA-32. This study reveals that single-precision operations can be performed with precision control bits of the processor staying as double-precision. Performance evaluation demonstrates that our implementation method reduced the performance decline by the semantics down to 40%. ( 9 Refs)

**Subfile:** C

**Descriptors:** formal specification; Java; program compilers; programming language semantics; software performance evaluation

**Identifiers:** floating-point semantics; Java just-in-time compiler; precision control bits; performance evaluation; IA-32

**Class Codes:** C4210L (Formal languages and computational linguistics); C6150N ( Distributed systems software); C6150C (Compilers, interpreters and other processors); C6110F (Formal methods)

Copyright 2004, IEE

**Abstract:** IA-32 processors yield different results of floating-point operations from other processors, even though they are compliant with IEEE 754. The **Java** specifications need **runtime** systems to implement the FP-strict semantics, which other IEEE 754 compliant processors naturally fulfill...

2003

11/5,K/7 (Item 3 from file: 2) [Links](#)

INSPEC

(c) 2008 Institution of Electrical Engineers. All rights reserved.

07622443 **INSPEC Abstract Number:** B2000-07-6210C-105, C2000-07-7410F-116

**Title:** Distributed object middleware for network software architecture

**Author** Weinstein, S.B.

**Conference Title:** NOMS 2000. 2000 IEEE/IFIP Network Operations and Management Symposium 'The Networked Planet: Management Beyond 2000' (Cat. No.00CB37074) p. 1003

**Editor(s):** Hong, J.W.; Weihmayer, R.

**Publisher:** IEEE, Piscataway, NJ, USA

**Publication Date:** 2000 **Country of Publication:** USA xxvii+1022 pp.

**ISBN:** 0 7803 5928 3 **Material Identity Number:** XX-1999-03415

**Conference Title:** Proceedings of Network Operations and Management Symposium

**Conference Date:** 10-14 April 2000 **Conference Location:** Honolulu, HI, USA

**Medium:** Also available on CD-ROM in PDF format

**Language:** English **Document Type:** Conference Paper (PA)

**Treatment:** Practical (P)

**Abstract:** Summary form only given. The tutorial describes the role of distributed object technology in making future networks more open, programmable, and responsive to quickly changing needs. It places particular emphasis on CORBA and Java as foundation technologies. Beginning from even more fundamental concepts of sockets and remote procedure calls, the tutorial explains the elements of the CORBA ORB and how service interfaces written in CORBA IDL (Interface Definition Language) are compiled into different native languages. This is used to realize interoperability among software modules written in different languages and running on **different computing** platforms. Applications to both control and management are suggested. A brief comparison is made with the alternative DCOM. The **Java Virtual Machine** and protections built into the Java language are also explained, as is the use of Java applets to install CORBA objects in client machines, integrating the two key technologies. Major active network architectures, and how they use transportable software, are reviewed. Programmable architectures and the concept of virtual networks are introduced, including description of the reference model and the interfaces being standardized in IEEE P1520, Programming Interfaces for Networks. Examples are given of services being built on this technology. The tutorial requires only a basic understanding of protocols and of communications and computing concepts. ( 0 Refs)

**Subfile:** B C

**Descriptors:** client-server systems; distributed object management; Java; open systems; protocols; remote procedure calls; software architecture; software portability; telecommunication computing; telecommunication control; telecommunication network management

**Identifiers:** distributed object middleware; network software architecture; sockets; remote procedure calls; CORBA ORB; service interfaces; CORBA IDL; Interface Definition Language; interoperability; software modules; control; management; Java Virtual Machine; Java applets; active network architectures; transportable software; programmable architectures; virtual networks; IEEE P1520; Programming Interfaces for Networks; protocols

**Class Codes:** B6210C (Network management); C7410F (Communications computing); C6110J (Object-oriented programming); C6150N (Distributed systems software)

Copyright 2000, IEE

**Abstract:** ...is used to realize interoperability among software modules written in different languages and running on **different computing** platforms. Applications to both control and management are suggested. A brief comparison is made with the alternative DCOM. The **Java Virtual Machine** and

protections built into the Java language are also explained, as is the use of...

**2000**

11/5,K/8 (Item 4 from file: 2) [Links](#)

INSPEC

(c) 2008 Institution of Electrical Engineers. All rights reserved.

06907521 **INSPEC Abstract Number:** C9806-6110P-015

**Title:** Heterogeneous parallel computing with Java: jabber or justified?

**Author** Dietz, H.G.

**Author Affiliation:** Purdue Univ., West Lafayette, IN, USA

**Conference Title:** Proceedings Seventh Heterogeneous Computing Workshop (HCW'98) (Cat. No.98EX126) p. 159-62

**Editor(s):** Antonio, J.K.

**Publisher:** IEEE Comput. Soc , Los Alamitos, CA, USA

**Publication Date:** 1998 **Country of Publication:** USA ix+201 pp.

**ISBN:** 0 8186 8365 1 **Material Identity Number:** XX98-00898

**U.S. Copyright Clearance Center Code:** 0 8186 8365 1/98/\$10.00

**Conference Title:** Proceedings Seventh Heterogeneous Computing Workshop (HCW'98)

**Conference Sponsor:** IEEE Tech. Committee on Parallel Process.; Office of Naval Res

**Conference Date:** 30 March 1998 **Conference Location:** Orlando, FL, USA

**Language:** English **Document Type:** Conference Paper (PA)

**Treatment:** Practical (P)

**Abstract:** Is Java a good language for programming **heterogeneous parallel computing** systems? It is a well-designed modern language that, combined with the **Java Virtual Machine (JVM)**, offers a myriad of modern programming features and excellent portability. However, in speedup-oriented **heterogeneous computing**, the primary concern is obtaining the best possible execution speed from the heterogeneous system. The paper briefly discusses what heterogeneous parallel computing is really about, lists some of the key features of Java, and finally summarizes how well Java matches the task of programming for heterogeneous parallel computing. ( 0 Refs)

**Subfile:** C

**Descriptors:** object-oriented languages; object-oriented programming; parallel programming

**Identifiers:** heterogeneous parallel computing system programming; Java Virtual Machine; portability; speedup-oriented heterogeneous computing; execution speed; Java

**Class Codes:** C6110P (Parallel programming); C6110J (Object-oriented programming); C6150N (Distributed systems software); C6140D (High level languages)

Copyright 1998, IEE

**Abstract:** Is Java a good language for programming **heterogeneous parallel computing** systems? It is a well-designed modern language that, combined with the **Java Virtual Machine (JVM)**, offers a myriad of modern programming features and excellent portability. However, in speedup-oriented **heterogeneous computing**, the primary concern is obtaining the best possible execution speed from the heterogeneous system. The...

1998

11/5,K/10 (Item 1 from file: 6) [Links](#)

Fulltext available through: [Check for PDF Download Availability and Purchase](#)  
NTIS

(c) 2008 NTIS, Intl Cpyrht All Rights Res. All rights reserved.

2159080 NTIS Accession Number: ADA373930/XAB

**Damage Control and Log Taking Java Applications for Shipboard Wireless LANs**

( Master's thesis )

Sayat, H.

Naval Postgraduate School, Monterey, CA.

**Corporate Source Codes:** 019895000; 251450

Dec 1999 235p

**Language:** English Document Type: Thesis

**Journal Announcement:** USGRDR0013

Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at [orders@ntis.fedworld.gov](mailto:orders@ntis.fedworld.gov). NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

**NTIS Prices:** PC A12/MF A03

**Country of Publication:** United States

Damage control communications and watchstander log taking practices need to be improved for onboard submarines and ships. Currently, damage control rely on a slow, error prone process involving sound powered telephone talkers and grease pencil annotated white board. Also log taking practice suffers from similar problems. Logs are taken on paper forms, corrected daily, and filed in cabinets. Wireless network and mobile computing devices can be a solution to improve the efficiency of these practices along with some others. In this thesis, a distributed Java prototype software is developed to utilize the benefit of an onboard Intranet utilizing wireless LANs and pen based handheld computers. For both practice areas, data could be entered into a handheld computer and then wirelessly transmitted to a database server. Those data can be used by powerful main platforms and different supervisors can reach it any time in parallel. An applet and a servlet program modules are created to provide small, user friendly, platform independent electronic forms. Since handheld computers have some limitations like screen dimensions, computing power, and **Java Virtual Machine**, features of these software approaches are tested on a few **different handheld computers** to find the best software approach and computer product.

**Descriptors:** \*Local area networks; \*Damage control; \*Java programming language; Data bases; Theses; Prototypes; Computer applications; Hand held; Radiotelephones

**Identifiers:** NTISDODXA

**Section Headings:** 62B (Computers, Control, and Information Theory--Computer Software); 62GE (Computers, Control, and Information Theory--General)

...independent electronic forms. Since handheld computers have some limitations like screen dimensions, computing power, and **Java Virtual Machine**, features of these software approaches are tested on a few **different handheld computers** to find the best software approach and computer product.

Application: 10/670836 Date: 1/30/2008

[File 275] **Gale Group Computer DB(TM)** 1983-2008/Jan 25  
(c) 2008 The Gale Group. All rights reserved.

[File 47] **Gale Group Magazine DB(TM)** 1959-2008/Jan 23  
(c) 2008 The Gale group. All rights reserved.

[File 621] **Gale Group New Prod. Annou.(R)** 1985-2008/Jan 15  
(c) 2008 The Gale Group. All rights reserved.

[File 636] **Gale Group Newsletter DB(TM)** 1987-2008/Jan 29  
(c) 2008 The Gale Group. All rights reserved.

[File 148] **Gale Group Trade & Industry DB** 1976-2008/Jan 16  
(c) 2008 The Gale Group. All rights reserved.

*\*File 148: The CURRENT feature is not working in File 148. See HELP NEWS148.*

[File 624] **McGraw-Hill Publications** 1985-2008/Jan 30  
(c) 2008 McGraw-Hill Co. Inc. All rights reserved.

*\*File 624: Homeland Security & Defense and 9 Platt energy journals added Please see HELP NEWS624 for more*

[File 98] **General Sci Abs** 1984-2007/Dec  
(c) 2007 The HW Wilson Co. All rights reserved.

[File 553] **Wilson Bus. Abs.** 1982-2008/Jan  
(c) 2008 The HW Wilson Co. All rights reserved.

[File 15] **ABI/Inform(R)** 1971-2008/Jan 30  
(c) 2008 ProQuest Info&Learning. All rights reserved.

[File 635] **Business Dateline(R)** 1985-2008/Jan 29  
(c) 2008 ProQuest Info&Learning. All rights reserved.

[File 9] **Business & Industry(R)** Jul/1994-2008/Jan 29  
(c) 2008 The Gale Group. All rights reserved.

[File 610] **Business Wire** 1999-2008/Jan 30  
(c) 2008 Business Wire. All rights reserved.

*\*File 610: File 610 now contains data from 3/99 forward. Archive data (1986-2/99) is available in File 810.*

[File 810] **Business Wire** 1986-1999/Feb 28  
(c) 1999 Business Wire . All rights reserved.

[File 647] **CMP Computer Fulltext** 1988-2008/Jan W2  
(c) 2008 CMP Media, LLC. All rights reserved.

[File 674] **Computer News Fulltext** 1989-2006/Sep W1  
(c) 2006 IDG Communications. All rights reserved.  
*\*File 674: File 674 is closed (no longer updates).*

[File 696] **DIALOG Telecom. Newsletters** 1995-2008/Jan 28  
(c) 2008 Dialog. All rights reserved.

[File 369] **New Scientist** 1994-2007/Sep W4  
(c) 2007 Reed Business Information Ltd. All rights reserved.

[File 613] **PR Newswire** 1999-2008/Jan 30  
(c) 2008 PR Newswire Association Inc. All rights reserved.

*\*File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.*

[File 813] **PR Newswire** 1987-1999/Apr 30  
(c) 1999 PR Newswire Association Inc. All rights reserved.

[File 370] **Science** 1996-1999/Jul W3  
(c) 1999 AAAS. All rights reserved.  
*\*File 370: This file is closed (no updates). Use File 47 for more current information.*

[File 20] **Dialog Global Reporter** 1997-2008/Jan 30  
(c) 2008 Dialog. All rights reserved.

[File 16] **Gale Group PROMT(R)** 1990-2008/Jan 21  
(c) 2008 The Gale Group. All rights reserved.  
*\*File 16: Because of updating irregularities, the banner and the update (UD=) may vary.*

[File 160] **Gale Group PROMT(R)** 1972-1989  
(c) 1999 The Gale Group. All rights reserved.

[File 484] **Periodical Abs Plustext** 1986-2008/Jan W4  
(c) 2008 ProQuest. All rights reserved.

[File 634] **San Jose Mercury** Jun 1985-2008/Jan 27  
(c) 2008 San Jose Mercury News. All rights reserved.

| Set | Items  | Description  |
|-----|--------|--|
| S1  | 166528 | S (HETEROGENEOUS OR DIFFERENT OR SEPARATE) (3N) (PROCESSOR? ? OR COMPUTER? ? OR CPU? ? OR CENTRAL()PROCESSING OR SERVER? ? OR MICROCOMPUTER? ? OR PC OR COMPUTING OR MAINFRAME? ? OR MAIN() (FRAME OR FRAMES)) |
| S2  | 59638  | S JVM OR JAVA()VIRTUAL()MACHINE? ? OR JAVA(3N) INTERPRETER OR JAVA(2N) RUNTIME OR JIT  |
| S3  | 1592   | S COMMON()MEMORY   |
| S4  | 75782  | S DIRECT()MEMORY()ACCESS OR DMA  |
| S5  | 0      | S S1 (100N) S2 (100N) S3 (100N) S4   |
| S6  | 7      | S S1 (3N) S2   |
| S7  | 54     | S S1 (10N) S2  |
| S8  | 31     | RD S7 (unique items)   |
| S9  | 26     | S S8 AND PY < 2004   |
| S10 | 49     | S S2 (100N) S4   |
| S11 | 28     | S S10 (100N) S3  |
| S12 | 26     | S S11 AND PY < 2004  |